BDCP Biological Goals and Objectives

Policy Statements

1. BDCP biological goals and objectives are benchmarks, with goals statements articulating what the plan is intended to achieve and objective statements providing a more specific articulation of the desired outcomes, and means for achieving them. (*see Item D below*)

2. BDCP biological goals and objectives are not ESA or NCCPA permit conditions. ESA and NCCPA permit compliance is tied to the implementation of conservation measures as described in the plan. (*see Item D below*)

3. Biological goals will be expressed as desired biological outcomes such as target increases in growth rates, survival, or population size. Biological objectives may be expressed as biological outcomes or as stressor reduction targets (including physical habitat targets) depending on the level of information and uncertainty regarding the objective. (*see items A, B, and C below*)

4. Biological objectives will conform to the "SMART" guidelines—specific, measurable, attainable, relevant, and time-bound. Where there is high uncertainty regarding the ability to attain or measure an objective, such issues will be explicitly addressed through the monitoring, evaluation and the adaptive management programs.

5. If the results of the monitoring and evaluation programs suggest that biological objectives are problematic to measure or are not attainable, they can be adjusted in accordance with the adaptive management program, the best available science at the time, and concurrence of the fish and wildlife agencies. (*see Item I below*)

6. Many factors will affect the BDCP's ability to achieve its goals. BDCP will contribute to meeting them to the extent the conservation measures can influence their success.

7. Success in achieving the biological goals and objectives will be measured in implementation through the monitoring and evaluation program.

8. Conservation measures may be adjusted through the adaptive management process, which will be designed to distinguish effective (or better) management alternatives from ineffective (or worse) alternatives.

9.

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Policy Questions and Answers

A. What are the different functions of BDCP goals versus objectives?

- Biological goals are generally expressed as broad principles that provide the rationale for the conservation measures set out in the plan.[1]
- Biological objectives are used to step down the biological goals into manageable and measurable units. These measurable objectives may be either habitat or species based, and are generally described with specificity.[2]
- The following definitions are currently being used for BDCP:

  Goal*- A broad, guiding principle that identifies expected outcomes of a conservation plan. Biological goals describe the desired future condition of ecosystems, natural communities, and species, which are expected to be achieved through Plan implementation. Biological goals are typically qualitative rather than quantitative (65 Federal Register 10635242-35257, June 1, 2000).*

  Objective *- A measurable outcome that when combined with other objectives will collectively achieve a biological goal. Objectives capture the direct changes to the environment expected from the conservation measures and provide measurable targets.*

- The function of "goals" and "objectives" is similar – to articulate what the plan is intended to achieve. However, they reflect different levels of specificity regarding the outcome. Goals are not likely to be modified during implementation, but objectives could be refined based on new information. There is no regulatory implication associated with a "goal" versus an "objective", and neither goals nor objectives are required to be achieved as a condition of regulatory authorizations.

B. When can BDCP objectives be framed as biological outcomes versus physical habitat conditions?

The determination of when to use a species-based outcome versus a habitat-based metric will be made based on the level of existing understanding and available data regarding a given species and its relationship to various environmental attributes that define suitable habitat.

C. Should BDCP objectives be stated as population responses? Can we develop credible predictions?

- The BDCP objectives should be achievable within the context of what can be accomplished by the plan's conservation measures (which moderate the effects of only some stressors and/or address only a portion of a species life cycle).
- The ability to develop credible predictions of population response is very limited (more so for

[1] Although the NCCPA provides little specific guidance regarding the role of biological goals and objectives in conservation plans, the California Department of Fish and Game has embraced the inclusion of goals and objectives in conservation plans consistent with the approaches set out in this paper.

[2] According to the federal Five Point HCP Policy, "the Services and the applicants must determine the appropriate unit of measure such as numbers of individuals at a particular life stage, all life stages, or quantity or quality of habitat." 65 Fed. Reg. 35242, 35244 (June 1, 2000).

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some species than others). Few quantitative life cycle, or bioenergetic models exist, and the data to support these models is very limited.

D. Do objectives serve as benchmarks or permit terms, and how do they relate to adaptive management?

- BDCP goals and objectives should serve as benchmarks, not requirements of the regulatory authorizations/permits (see definitions and discussion under #1 above). As stated in the Service's 5-Point Policy, explicit biological goals and objectives clarify the purpose and direction of an HCP's operating conservation program. They create parameters and benchmarks for developing conservation measures, provide the rationale behind the HCP's terms and conditions, promote an effective monitoring program, and, where appropriate, help determine the focus of an adaptive management strategy. Conservation measures, however, may be framed in terms of commitments to achieve biological outcomes reflected in the biological goals and objectives for the plan.
- Biological goals and objectives do not provide the basis for permitting decisions by the federal and state fish and wildlife agencies under the ESA or the NCCPA. The sufficiency of a plan is assessed against the regulatory standards of these statutes, both of which set out specific criteria for the issuance of take authorizations. These permitting criteria do not establish a specific role for biological goals and objectives in determinations of plan adequacy. Nonetheless, the biological goals and objectives for a plan should be consistent with its proposed conservation actions.[3]
- The BDCP biological goals and objectives will be closely linked to the adaptive management program, which will set out a process aimed at determining and implementing responses to increase the likelihood of achieving the biological goals and objectives. As such, the range of adaptive management responses set out in the BDCP will be partly informed by the Plan's biological goals and objectives. In the BDCP, adaptive triggers (e.g., specific values of monitoring metrics) may be identified to serve as warning signals that conservation measures may not be advancing BDCP objectives and that adaptive management actions may need to be taken.

E. How are non-project stressors reflected in the objectives and adaptive management program?

Non-project stressors are only reflected in the objectives if the plan intends to include actions to address these stressors. Stressors that are beyond the control of the permitee, such as nutrient loading, are not reflected in the objectives. Other chapters of the plan do describe the effect of other stressors not being addressed by the plan. The role of non-project stressors will be considered in evaluating progress toward achieving BDCP goals and objectives as part of the adaptive management decision making process. BDCP will not operate in a vacuum and will consider what is going on around it.

[3] The ESA, for instance, requires that the impacts to covered species of an action permitted under section 10 be minimized and mitigated to the maximum extent practicable, and that the authorized taking not cause jeopardy to covered species. Under the NCCPA, DFG may issue a permit upon a finding that the conservation plan provides for the conservation and management of covered species. The NCCPA sets out ten specific criteria for plan approval; however, none of these criteria includes mention of biological goals and objectives.

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F. Should objectives describe amount of change in baseline (physical and/or biological)?

Yes, BDCP objectives should be framed in the context of the expected change, either to be met or to be achieved relative to existing, or historic conditions (where applicable and feasible). In some cases the existing condition (or historic condition) may not be well known, in which case it may not be possible to predict a level of change with a high degree of accuracy. Similarly, there may not be data or tools available to accurately predict expected outcomes, or the level of uncertainty (in knowledge and/or natural variability) may be such that accurate predictions are difficult to make. The Plan should avoid presenting a false sense of precision. It should also be recognized that "existing" conditions will change over time, and these changes may affect predicted levels of change.

G. What's the "daylight" between BDCP objectives and conservation measures?

Objectives should not be framed as actions to be taken, but rather as outcomes to be achieved. The Plan will commit to implementing specific conservation measures (i.e. actions) which are expected to achieve the expressed goals and objectives.

H. What does contribute to recovery mean?

Actions that provide for the conservation and management of species equate to contributions to recovery. Actions that contribute to recovery should provide a net benefit to the species, not just maintain the status quo. The BDCP is intended to provide a landscape level approach to conservation and management such that multiple actions, addressing multiple stressors will be taken in an effort to provide broad ecosystem-level support to enhance natural communities and contribute to species recovery.

I. Can biological goals and objectives be revised in implementation?

The BDCP Adaptive Management Program will include provisions and procedures for evaluating progress toward achieving the Plan's stated goals and objectives. If the goals and objectives are not being met, the effects of non-project stressors will be considered and conservation measures will be reviewed, evaluated, and adjusted as appropriate in accordance with the Adaptive Management Program, including adaptive limits, other constraints and associated triggers. If, based on the best available science, it is determined that the goals and objectives as originally crafted are not achievable, or should be adjusted to reflect new information, then it is anticipated that the goals and objectives could be revised with the concurrence of the fish and wildlife agencies. Modifying goal statements will require a much higher bar. It is expected that objective statements, particularly where there is currently a high degree of uncertainty, will require some refinement during implementation as new information emerges.

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